



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,803	08/04/2004	Rixford Smith	50126-8	4802
23971	7590	03/31/2006	EXAMINER	
BENNETT JONES C/O MS ROSEANN CALDWELL 4500 BANKERS HALL EAST 855 - 2ND STREET, SW CALGARY, AB T2P 4K7 CANADA			HAYES, BRET C	
			ART UNIT	PAPER NUMBER
			3641	
DATE MAILED: 03/31/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/710,803

Applicant(s)

SMITH, RIXFORD

Examiner

Bret C. Hayes

Art Unit

3641

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 21-23 and 25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-11, 15-20, 24, 26 and 27 is/are rejected.
- 7) ☒ Claim(s) 6-8 and 12-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01 NOV 04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 21 – 23 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 31 JAN 06. It would appear that with respect to claims 21 – 23, Applicant has traversed without offering sufficient arguments against the restriction requirement. Because Figures 5 and 7 disclose the bore being the same diameter throughout its length, the restriction requirement is proper and, therefore, made FINAL.
2. Claim 25 has also been withdrawn as being dependent upon a claim (22) drawn to a non-elected species.
3. The amendment of claims 26 and 27 has vacated the restriction requirement.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Art Unit: 3641

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1 – 5, 9 – 11, 15 – 19, 24, 26 and 27 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 – 30 of U.S. Patent No. 6,789,454 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because: claims 1 and 24 do not distinguish over the claims of the cited Patent because claims 1 and 24 do not require that the breech end have concrete disposed therein, but rather, that outer and inner support layers *between* a breech end and an open end have concrete disposed therein, which is an obvious variant of what is claimed in the Patent; regarding 2 – 5, 9 – 11, 18 and 19, these limitations are also claimed in the cited Patent; regarding claims 15 – 17, it is disclosed in the Patent that reinforcing elements can be used in the concrete disposed between the outer and inner support layers (to say nothing of it being well known in the art of concrete to utilize rebar as a reinforcing element because of the somewhat ‘brittle’ nature of concrete); and, regarding method claims 26 and 27, given the structure disclosed and claimed in the Patent, the method of operating the device would have been inherent, since it is the normal and logical manner of using the device. Further, regarding claims 26 and 27, there would appear to have been no reason that these method claims could not have been presented during the prosecution of that application Serial Number, 10/270,735.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 3641

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

7. Claims 1 – 5, 9 – 11, 19, 20, 24, 26 and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by US Patent No. 6,352,740 B1 to Warnecke.

8. Re – claims 1 – 5, 9 – 11 and 24, Warnecke discloses the claimed invention including a gun barrel, as in Fig. 2, for example, with a breech end and an open end and a bore* disposed between the breech end and the open end comprising an outer supporting layer 5, an inner supporting layer 1, and concrete 5' disposed between the layers, the concrete having compressive strength of at least 10 megapascals**. *Regarding a breech end, an open end and a bore between them, this would be considered to be inherent in all gun barrels of this type. Regarding the materials used for the support layers, Warnecke discloses steel gun barrels as at col. 1, line 15, for example, needing repair. Further, because the hatching patterns (the markings used to show materials of cross-sectioned elements as in Engineering Graphics) are the same for layer 1, which has been shown to include steel, as that of layer 5, it is reasonable to infer that the layer 5 is also made of steel. **Regarding the compressive strength of concrete, as it is most commonly used, its compressive strength ranges from 3000 – 5000 psi, which equates to roughly 20 – 34 megapascals, which is at least 10 megapascals as claimed. As an aside, one would be hard-pressed to find a use for concrete having a compressive strength of less than 10 megapascals, as it would crumble under any normal usage found today. By design, concrete is meant to be extremely strong in compression.

9. Re – claim 19, Warnecke does not disclose the breech end needing to be closed.

However, the claim merely recites that the breech end be closeable. It has been held that the recitation that an element is “capable of” performing a function, such as to be able to be closed,

Art Unit: 3641

is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138. In this case, the breech end of any gun barrel is so 'closeable'.

10. Re – claim 20, Warnecke, as applied to claim 19 above, is also capable of being closed with a breech plug as claimed.

11. Re – method claims 26 and 27, in light of the structure disclosed by Warnecke, the method of operating the device would have been inherent, since it is the normal and logical manner in which the device can be used.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 15 – 18, 26 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Warnecke as applied above.

14. Re – claims 15 – 17, Warnecke disclose the invention substantially as claimed except for reinforcing elements disposed in the concrete. Because it is well known in the concrete art to utilize rebar, or similar, in concrete to improve its tensile strength, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Warnecke to include reinforcing elements in order to increase the tensile strength of the device.

15. Re – claim 18, Warnecke disclose the invention substantially as claimed as applied above, except for explicitly stating that the breech end is closed. This is an inherent quality in

Art Unit: 3641

most gun barrels because of the need to eject a projectile from the 'business end' of the barrel.

Were the barrel to be open at the breech end, it would not function nearly as well in its intended capacity, but would make a rather lethal firework instead.

16. Re – claims 26 and 27, the examiner contends that, alternatively, given the structure disclosed by Warnecke, the method of using the device would have been obvious to one of ordinary skill in the art at the time the invention was made, since it is the normal and logical manner in which the device could be used.

Allowable Subject Matter

17. Claims 6 – 8 and 12 – 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

18. The following is a statement of reasons for the indication of allowable subject matter: the prior art neither discloses nor fairly teaches the claimed combination including, *inter alia*, cardboard or polymeric materials as the outer and inner layer materials.

19. This statement is not intended to necessarily state all the reasons for allowance or all the details why the claims are allowed and has not been written to specifically or impliedly state that all the reasons for allowance are set forth (MPEP 1302.14).

Conclusion

Any inquiry concerning this communication should be directed to Bret Hayes at telephone number (571) 272 – 6902 or email address bret.hayes@uspto.gov. The examiner can normally be reached Monday through Thursday from 5:30 am to 4:00 pm, Eastern Standard Time.

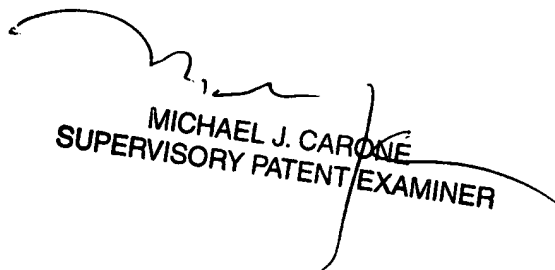
Art Unit: 3641

The Central FAX Number is **571-273-8300**.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone, can be reached at (571) 272 – 6873.

bh

27-Mar-06


MICHAEL J. CARONE
SUPERVISORY PATENT EXAMINER